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ABSTRACT OF THE DISCLOSURE

A method for reducing artifacts in image data generated by a computed tomography system is provided. The artifacts are due to the presence of a high density object in a subject of interest. Initially, measured sinogram data is received from the computed tomography system. The sinogram data is representative of a plurality of sinogram elements. The measured sinogram data is reconstructed to generate initial reconstructed image data. A trace of the high density object is identified in the measured sinogram data. Then a region of interest is identified in the initial reconstructed image data. An optimization criterion is identified based upon the region of interest. The sinogram elements in the trace of the high density object in the measured sinogram data is iteratively adjusted based upon the optimization criterion to generate corrected sinogram data. The corrected sinogram data is reconstructed to generate improved reconstructed image data.